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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,465

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Young-Lak Kim

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ALEXANDRIA, VA 22314

EXAMINER

SHEDRICK, CHARLES TERRELL

ART UNIT

PAPER NUMBER

2617

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/594,465

Applicant(s)

KIM ET AL.

Examiner

CHARLES SHEDRICK

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/22)
Paper No(s)/Mail Date ____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Claim Objections

1. Claims 6, 9 and 11 are objected to because of the following informalities: The claim language indicates a synchronous modem and an asynchronous modem, however, there are instances where the claim language refers back to the modem. In the instances where the language refers back to “the modem” it is somewhat unclear as to whether the Applicant is referring back to the synchronous modem or the asynchronous modem. Appropriate correction is required.
2. Claim 11 is objected to because of the following informalities: Claim 11 depends on claim 11. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Claim 14 reads The hand-over method of a multi mode multi band between the asynchronous communication network and the synchronous communication network according to claim 13, characterized in that: the initial transmitting power value (from claim 13) is calculated by subtracting an average power value (average power value introduced here) of the synchronous modem from the initial electric power (? the electric power ?); the average receiving power value (proper antecedent basis is noted) of the synchronous modem is

calculated by the power value transmitted from the base transceiver station of the synchronous communication mobile system were (I think this should read “where”)the synchronous modem locates; and the initial power value (which initial power value – initial electric power or initial transmitting power)is determined by the average value of the power value (the average of which ‘power value’ – the initial transmitting ‘power value’ receiving power value) outputted from the mobile communication terminal in the asynchronous mobile.

6. Claim 15 reads the hand-over method of a multi mode multi band between the synchronous communication network and the synchronous communication network according to claim 13, characterized in that: the initial transmitting power value calculated by the mobile communication terminal is calculated by subtracting the average receiving value of the synchronous modem from the initial power value and further adding an offset power thereto; the average receiving power value of the synchronous modem is the average value of the power value transmitted from the base transceiver station to be received where the synchronous modem locates, and the initial power value is determined by the average of the power value outputted from the asynchronous mobile communication system to the mobile communication terminal; and the initial transmitting value is corrected by the offset power.

7. For Examination purposes The Examiner is unable to make sense out what appears to be measured in claims 14 and 15. The Applicant is encouraged to carefully review the claim language for clarity and proper antecedent basis.

Double Patenting

8. Claims 1-16 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1-18, 26-27 and 30-34 of copending Application No. 11/628977. Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter refers to a asynch to synch HO and low power state of the modem.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 1-13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al US Patent No.: 6,704,581 B1 in view of Schmidt 7,526,267 B2.

Consider Claims 1, 7 and 13, Park teaches a multi mode multi band mobile communication terminal which can communicate with the asynchronous mobile communication system and the synchronous mobile communication system (e.g., **300 of figure represent a base station that can communicate with the asynch bs and sync bs - col. 4 lines 34-36**), and which performs hand-over between the asynchronous mobile communication system and the synchronous mobile communication system(e.g., **see at least figure 9 and abstract**), comprising: during communicating with the asynchronous mobile communication system, if conditioned in a predetermined hand-over, an asynchronous modem outputting a modem operating signal for operating a modem to transfer and receive the signal of the synchronous mobile communication system(e.g., **the dual mode station communication operating parameters and measurement - see at least figure 9 and col. 7 lines 13- col. 10 line 49**).

However, Park does not specifically teach a synchronous modem operated in an off-state according to the modem operating signal outputted from the asynchronous mobile communication system and then transited to a low power mode, which is a standby mode, wherein said multi mode multi band mobile communication terminal performs the hand-over to the multi mode multi band mobile communication terminal according to the hand-over triggering from the asynchronous mobile communication system by the synchronous modem in the standby mode.

In analogous art, Schmidt teaches a short range and cellular modem (e.g., **cellular core 110 and short range core 130**) operated in an off-state according to the modem operating signal outputted from the mobile communication system and then transited to a low power mode, which is a standby mode (e.g., **see col. 6 lines 7-22**), wherein said multi mode multi band mobile

communication terminal (e.g., **terminal 100**) performs the hand-over to the multi mode multi band mobile communication terminal according to the hand-over triggering from the Cellular/or Short Range mobile communication system by the short range or cellular modem in the standby mode(e.g., see **col. 6 lines 7-22**.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Park to include a synchronous modem operated in an off-state according to the modem operating signal outputted from the asynchronous mobile communication system and then transited to a low power mode, which is a standby mode, wherein said multi mode multi band mobile communication terminal performs the hand-over to the multi mode multi band mobile communication terminal according to the hand-over triggering from the asynchronous mobile communication system by the synchronous modem in the standby mode for the purpose of saving batter power as taught by Schmidt **in col. 6 lines 7-16**.

Consider claims 2 and 8 and as applied to claims 1 and 7, Park as modified by Schmidt teaches that if the asynchronous modem transmits or receives signals to and from the asynchronous mobile communication system for setting a call, it determines that the hand-over condition is satisfied (e.g., **monitoring signal strength appropriate for making a call - see at least figure 9**).

Consider claims 3 and 9 and as applied to claims 2 and 8, Park as modified by Schmidt teaches the claimed invention characterized in that after operating the modem and performing a hand-over, the synchronous modem transmits and receives signals to and from the synchronous system and maintain the call setting state(e.g., see **handoff completion in at least**

figure 9).

Consider claims 4 and 10 and as applied to claims 1 and 7, Park as modified by Schmidt teaches the claimed invention characterized in that the mobile communication terminal enters the asynchronous mobile communication system area and hand-over cell, which is a boundary area of the synchronous mobile communication system area, the synchronous modem automatically requests to operate the synchronous modem (i.e., **based on signal measurements - see at least figure 9).**

Consider claims 5 and 11 and as applied to claims 4 and 10(for examination purposes -see claim objection) , Park as modified by Schmidt teaches the claimed invention characterized in that after operating the modem and performing the hand-over, the synchronous modem maintains the idle state(i.e., **listening state - figure 9 reflects a mobile that transitions to a listening state to receive information from the system).**

Consider **claims 6 and 12 and as applied to claims 1 and 11,** Park teaches the claimed invention except the multi mode multi band mobile communication terminal according to claim 1, characterized in that the low power mode of the synchronous modem represents that although the power of the synchronous modem is on, transmitting and receiving of information are suspended and a CPU operation of the modem is stopped.

In analogous art, Schmidt teaches multi mode multi band mobile communication terminal (e.g., **see figure 1**), characterized in that the low power mode represents that although the power is on, transmitting and receiving of information are suspended and a CPU operation of the modem is stopped (e.g., **sleep and relevant parts are listening col. 6 lines 7-41).**

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Park to include that the low power mode of the synchronous modem represents that although the power of the synchronous modem is on, transmitting and receiving of information are suspended and a CPU operation of the modem is stopped for the purpose of power conservation as taught by Schmidt.

Consider claim 16 and as applied to claim 13, Park as modified by Schmidt teaches the hand-over method of a multi mode multi band between the asynchronous communication network and the synchronous communication network according to claim 13, characterized in that at the time of the hand-over of the mobile communication terminal, the initial power value is transmitted together with a hand-over requesting message transmitted from the asynchronous mobile communication system to the mobile communication terminal (**see at least figure 9**).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES SHEDRICK whose telephone number is (571)272-8621. The examiner can normally be reached on Monday thru Friday 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571)-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Charles Shedrick/
Examiner, Art Unit 2617